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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,597	04/04/2008	**Lanny Franklin**	24002.0013U3	1640

23859 7590 04/18/2011

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EXAMINER	
LEVY, NEIL S	

ART UNIT	PAPER NUMBER
1615	

MAIL DATE	DELIVERY MODE
04/18/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/586,597	FRANKLIN ET AL.	
	Examiner	Art Unit	
	NEIL LEVY	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 -18,20-34,36-58* is/are pending in the application.

4a) Of the above claim(s) *2-16, 18, 36-38, 56-58* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,17,20-34 and 39-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/18/2011*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Receipt is acknowledged of the 180 references IDS. They were considered as they would have been by an examiner's standard search.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

ClaimS 2-16, 18, 36-38, 56-58 stand withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Species and invention
, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/19/2010.

Claim Rejections - 35 USC § 112

Claim 29 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

TWEEN should be identified generically. Trademark should not be used in claims.

Examiner will accept "a" added after the comma..

Claim1,17, 20-34, 39-55 stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for specific terpenes or terpenoids, for example, citral or those of claim 7,, does not reasonably provide enablement for ANY terpene components, which can be specific terpene compounds, or derivatives, essential oils,

and compositions of added ingredients, including thymol, as claimed.

The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims. The attempt to control any given nematode with the wide range of compounds claimed could only be done with extensive experimentation. The only data showing efficacy is with combinations with surfactants. Only citral and a few terpenes showed any efficacy. Thymol and citral was no better than citral alone. There is no basis for assuming thymol, or any other terpene, would be effective, without testing.

The factors to be considered in determining whether a disclosure meets the enablement requirement of 38 U. S. C. 112, the first paragraph have been described inn re Wands, 8 USPQ2D 1400 (Fed Cir. 1988). Among these factors are (1) the nature of the invention; (2) the state of the prior art; (3) the relative skill of those in the art; (4) the predictability or unpredictability of the art; (5) the breadth of the claims. (6) the amount of direction or guidance presented; (7) the presence or absence of working examples; and (8) the quantity of experimentation necessary. When the above factors are weighed, it is the examiner's position that instant disclosure fails to meet the enablement requirement for the following reasons:

(1) The nature of the invention: claims are to unqualified control and death by non-specific agents,
(2) The state of the prior art shows the use of these compounds for specific functions.
(3) The relative skill of those in the art. The relative skill of those in the art is high.
(4) The predictability or unpredictability of the art. The unpredictability of the art is very high.
(5) The breadth of the claims. The claims are very broad
(6) The amount of direction or guidance presented is sufficient for one to try.

(7) The presence or absence or working examples. There are some, but only with specific agents.
(8) The quantity of experimentation necessary extensive-there is no known levels of amount useful for any specific agent against any specific organism shown to exhibit death & destruction, without experimentation.

Claim 1 is to method of killing, but no steps are present indicating where, when or how the composition is applied to what.

Unacceptable kill rates <50% were seen with glucan particles of citral. This kill rate is what inventor accepts for beneficial nematode kill. The level of citral, or thymol-untested,needed would exceed the levels 250 or 500ppm needed to kill nematodes, when applied directly to the nematodes. Even at 500ppm, only 67% of (Table 15) root knot nematodes were killed by application of solutions of citral. Much higher rates would be expected to be needed when encapsulated formulations, as claimed, are applied directly to the nematodes, and even higher when applied to the soil. However, there is no suggestion supported by objective evidence that thymol would be effective against any particular nematode. Only in combination with citral and a surfactant would we expect, but not know, thymol would be able to kill under the test conditions shown. As to the method of preparation; the claim is not supported for incubating “under suitable conditions”. What it is that is incubated with the thymol and glucan and under what conditions is unstated. The simple mixing and holding for indefinite time would not be seen as providing a sufficient formulation to kill nematodes. The incubating components and their ratios/concentrations and conditions required to provide nematocidal compositions are not identified in claim 39.

Applicant's arguments that thymol now precludes the rejection is not persuasive, since the data presented are seen by examiner as expectant and speculative that a nematocidal composition would result from following the procedure of claim 39. Applicant has not shown that the mix of hollow glucan particles with thymol results in encapsulation of a composition which is in fact nematocidal.

Claim Rejections - 35 USC § 102 are withdrawn, in consideration of amendments & arguments

Claim Rejections - 35 USC § 103

Claims 1, 17, 20 -26,30,32-34,39-43,50-55 stand rejected under 35 U.S.C. 103(a) as being unpatentable over BESSETTE WO 0053020 in VIEW OF PANNELL EP 0242135 and further in view of SAUTER et al WO02/12348.

BESSETTE shows thymol a preferred element in an essential oil composition (page 4, penultimate paragraph) applied to lawn, garden, foliage, and soil to kill foot knot nematodes (lines 3-15, p 5, top and claims 8, 9 and Examples 1-62) with carriers, including encapsulates (page 6, top).

PANNELL at page 4, Example 2 prepares yeast cells by centrifugation, resulting in the hollow particles of the instant invention as claimed in open guise. As to content and other aspects of the particles, content as argued is not claimed. The use of PANNELLI's yeast, dead or alive, as encapsulate for BESSETTE'S thymol and other

essential oils is reasonable in view of the ecological advantage thereof and the increased payload. Note that the instant claims are to the same GRAS components of BESSETTE-terpenoid essential oils.

SAUTER shows one can prepare and use glucan particles from yeast in agriculture for crop protection. One in the art would find it obvious to use either the PANNELLI yeast preparations as SAUTER'S to prepare high loading encapsulates of terpenoids.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made desiring to utilize pest control means, to use any of art recognized means, as of BESSETTE, modified as desired to increase stability, dispersibility,compatability of ingredients, processing ease, & reduced toxicity to handlers.

All the critical elements of the instant are disclosed. The amounts and proportions of each ingredient are result effective parameters chosen to obtain the desired effects. It would be obvious to vary the form of each ingredient to optimize the effect desired, depending upon the particular species and application method of interest, reduction of toxicity, cost minimization, enhanced, and prolonged, or synergistic effects.

It has not clearly been established by an objective showing of some unobvious and/or unexpected result that the administration of the particular adjuvants, excipients, and concentration of actives and carrier provides any greater level of prior art expectation as claimed. There is no non-obvious and/or unexpected results obtained since the prior art

is well aware of the use yeast & glucan for formulation preparation and the use of additives for the functionality for which they are known to be
used is not a basis for patentability.
Applicant has not provided any objective evidence of criticality, nonobvious or unexpected results that the administration of the thymol, as claimed , provides any greater or different level of prior art expectation as claimed, and the use of ingredient for the functionality for which they are known to be used is not basis for patentability.

IT would have been Obvious to try thymol and other of the few preferred essential oils of BESSETTE in the PANNELL or SAUTER microcapsules with expectation of success of encapsulation of any of the essential oils, and application to nematodes with expectation of control in consideration of the 2007 supreme court decision in KSR V TELEFLEX @ 82 USPQ 2d @ 1385

The instant invention provides well known old art recognized compounds, with well known art recognized effects, applied by well known art recognized methods to achieve improved control as is well known in the art.

Double Patenting

Claim1,17, 20-35, 39-55 STAND provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim1-31, 35-47, 52-66, 69, 82 of copending Application No. 11/597116 as US 2010/0040656

. Although the conflicting claims are not identical, they are not patentably distinct from each other because The 11/- applications anticipates the instant claims.

.This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1,17, 20-35 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-17, 22-31, 35-45 of copending Application No10/488130 as US 2004/0248764

Although the conflicting claims are not identical, they are not patentably distinct from each other because The 10/488130 application anticipates the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140

F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NEIL LEVY whose telephone number is (571)272-0619. The examiner can normally be reached on Tuesday-Friday, 7:15AM to 5:45 PM EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT A. WAX can be reached on 571-272-0623. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ NEIL LEVY/

Primary Examiner, Art Unit 1615

4/14/2011